

CLAIMS

1. A nonaqueous electrolyte secondary battery comprising:

a positive electrode having an active material of a complex oxide capable

5 of storing and emitting lithium ions;

a negative electrode capable of storing and emitting lithium ions;

a separator disposed between the positive electrode and the negative
electrode; and

an electrolytic solution containing a nonaqueous solvent,

10 wherein a discharge curve of the nonaqueous electrolyte secondary
battery when being discharged with a constant power has two or more points of
step-like flexion near the end of electrical discharge in a range of 5% to 20% of
a discharge capacity thereof as determined from an initial discharge voltage in
a state of full charge to a discharge-end voltage.

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2. A nonaqueous electrolyte secondary battery comprising:

a positive electrode having an active material of a complex oxide capable
of storing and emitting lithium ions;

a negative electrode capable of storing and emitting lithium ions;

20 a separator disposed between the positive electrode and the negative
electrode; and

an electrolytic solution containing a nonaqueous solvent,

wherein the positive electrode contains a positive electrode active
material comprising a first active material of lithium-based complex oxide and
25 a second active material of another lithium-based complex oxide having an
average discharge voltage lower than an average discharge voltage of the first
active material, and

an added amount of the second active material is at least 5% and at most 20% in capacity of a total amount of capacity of the positive electrode active material.

5 3. The nonaqueous electrolyte secondary battery according to claim 2, wherein the first active material is a composite "A" expressed as Li_xMO_2 , "M" denoting a 3d transition metal, x being given as $0.9 \leq x \leq 0.98$, and the second active material is LiMnO_2 .

10 4. The nonaqueous electrolyte secondary battery according to claim 3, wherein the composite "A" contains at least one of materials expressed as $\text{Li}_x\text{Ni}_y\text{Mn}_z\text{Co}_{1-y-z}\text{O}_2$, x, y, and z being given as $0.9 \leq x \leq 0.98$, $0.3 \leq y \leq 0.4$, and $0.3 \leq z \leq 0.4$, and $\text{Li}_x\text{Ni}_y\text{Al}_z\text{Co}_{1-y-z}\text{O}_2$, x, y, and z being given as $0.9 \leq x \leq 0.98$, $0.3 \leq y \leq 0.4$, and $0.3 \leq z \leq 0.4$.